LA CROSSE® TECHNOLOGY

Professional Wireless Weather Station
WS-1517 | Quick Setup Guide

Carefully open the package and check that the following contents are complete:			
Wind Sensor TS805	**Rain Sensor TS906**	**Thermo-Hygro Sensor TS21**	**Wireless Display WS-1517**
• Requires 4 mounting screws • Requires 2 AA batteries (not included) • 1 hex key wrench	• Requires 4 mounting screws • Requires 2 AA batteries (not included)	• Wall mount adapter • Requires 2 AAA batteries (not included)	• 7.5 V AC/DC adapter (included) • 4 AA batteries (not included)
Wind Sensor also Protected under U.S. Patent: 6,761,065; RE42,057	*All items, including Wind Sensor, are Protected under U.S. Patents: 5,978,738; 6,076,044; & 6,597,990*		

Setup Instructions Step-by-Step

IMPORTANT: Make sure to observe the correct polarity when inserting batteries (not included). The "+" markings on the batteries must line up with the diagrams inside the battery compartments. **Inserting the batteries incorrectly may result in permanent damage to the weather station.** During the setup process, place the wireless display and the outdoor sensors on a surface with 5-10 feet between each sensor and the display.

Batteries: We recommend using Alkaline batteries for the remote sensors and the weather station when temperatures are above 32°F (0°C). We recommend using Lithium batteries for the remote sensors when temperatures are below 32°F (0°C).

Note: Setup all three sensors and allow them to run for at least **two minutes** before powering the weather station. Ensure all sensor readings are received to the weather station before mounting sensors outside.

STEP 1: Complete initial setup on a table with all components within 10 feet of each other.

STEP 2: Wind
Wind Cups
1. With a flashlight, look into the mounting hole of the wind cups.
2. Check that the set screw is backed off appropriately, not obstructing the opening.
3. Place the wind cups over the axle shaft of the wind sensor and gently slide them into place.
4. Use the hex key wrench tool provided to tighten the small set screw inside the cups.
5. Test to assure the wind cups are securely mounted on the anemometer shaft and spin freely
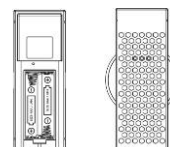
Battery installation
1. Remove four (4) screws from the battery compartment.
2. Open the battery compartment and install 2 AA Alkaline batteries (not included) matching the polarities shown.
3. Replace the battery compartment door and secure the screws.

STEP 3: Thermohygro
1. Install 2 AAA Alkaline batteries (not included) matching the polarities shown in the battery compartment.
2. Replace the battery compartment door.

STEP 4: Rain
1. Unlock the funnel-shaped top on the rain sensor by turning both knobs on the sides in a counter-clockwise direction.
2. Lift the funnel-shaped top off the rain sensor bucket.
3. Remove seven (7) small screws from the battery compartment cover.
4. Insert 2 AA Alkaline batteries (not included), matching the polarities as shown in the battery compartment.

5. Replace the battery compartment door and secure the screws.
6. Insert the funnel-shaped top into the rain sensor bucket. Turn the knobs clockwise to secure it.

Allow all sensors to operate for two minutes before starting the weather station.

STEP 5: Weather Station
1. Connect 7.5 V A/C adapter provided to the weather station and plug into to the wall power outlet.
   Note: The A/C adaptor connection is required for automatic backlight control function.
   When the weather station operates on battery power alone, the auto backlight control function is disabled.
2. Connect the table stand to the back of weather station when placing on a table or other horizontal surface.
3. Open the battery compartment door on the back of the main weather station.
4. Insert 4 AA batteries according to the polarities shown and replace the battery compartment door (optional).
5. Once the weather station is powered, the display will show all available LCD segments for a moment.

IMPORTANT: Do not press any buttons during the setup process which takes 5-15 minutes. During this time, the weather station will show the **pressure and weather icon** and **inHg** (inches of mercury) flashing. Setup is completed when the weather station shows default settings for pressure and altitude (sea level), indoor/outdoor temperature and humidity, wind and rain readings, etc.

STEP 6:
Set Wind Direction
1. Wait until all the sensor readings are received by the weather station.
2. Manually point the wind direction vane to the North (use a compass or map if necessary).
3. Press the SET opening located inside battery compartment with a paper clip or similar tool. This will set the local wind direction to North. **Only press once.** Continued presses of SET alternately toggles wind direction between the factory defaults preset or manual set direction.
   Note: Repeat this procedure every time when changing the batteries.
4. Watch for the next update to ensure the direction changed to North.
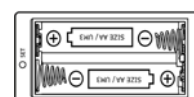
Step 7: Program the weather station. See "**Program Menu**" below.

Note: This weather station has been designed to work right out of the box 10-15 minutes after power setup. Language and City Code are the only **required** items to set in the program menu. When the WWVB radio-controlled time signal is received, the time and date will be set according to city code selected. There are additional operational details and suggestions for custom settings and alarms including:
- The time alarms
- The temperature alerts
- Daily rainfall alerts
- Wind alerts
- Local Pressure

See "**Custom Settings**" for details on the optional settings.

LCD Screen

Pressure and Weather

Temperature and Humidity

Wind

Clock and Alarm

Rain

ALARM CHART   HISTORY   MEMORY   CHANNEL   SET   ▽   △
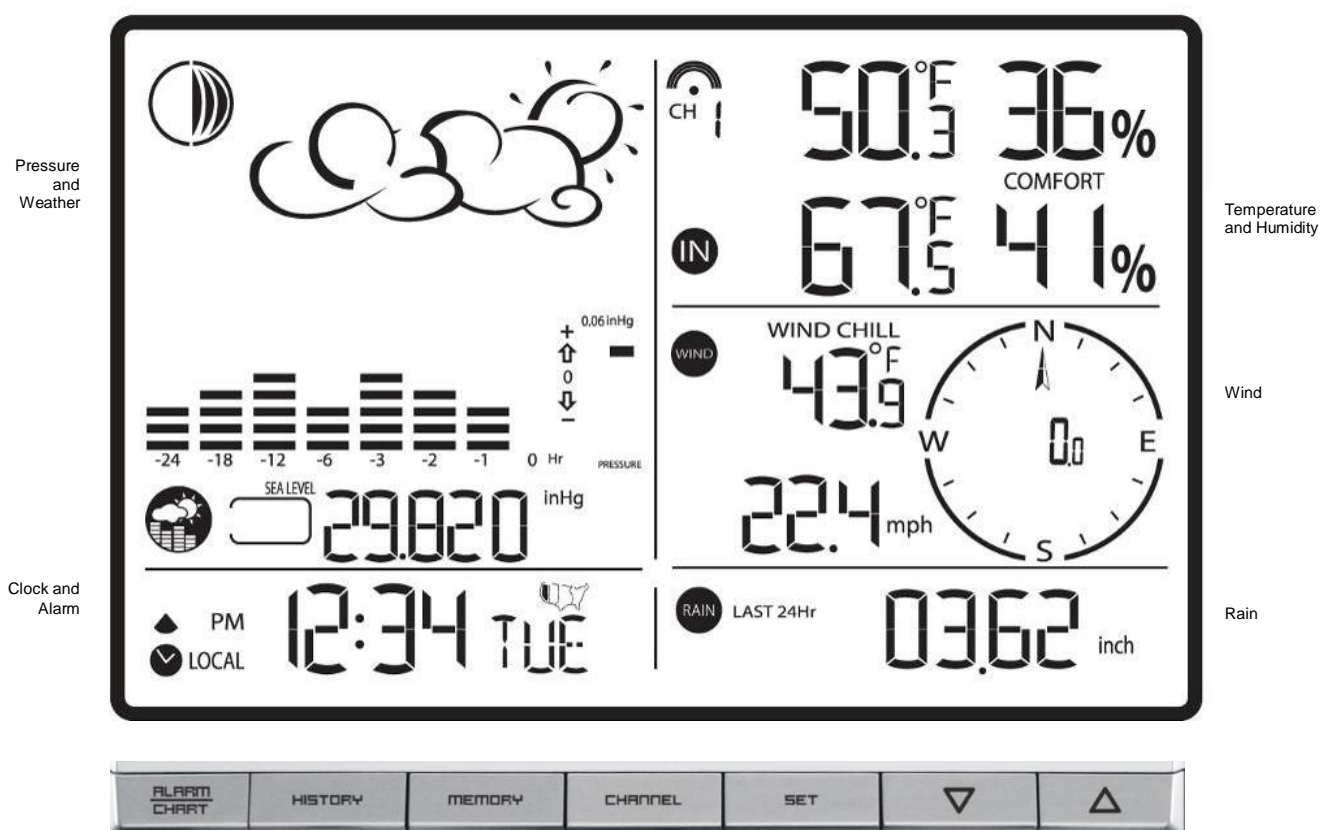
Program Menu

Press the UP or DOWN arrow button until the **clock and alarm icon** flashes. The SET button will move through the program menu. The UP or DOWN arrow button will change a value.

1. Hold the SET button until the day of week language abbreviation **ENG** will flash. Press the UP or DOWN arrow button to select the desired language for day of the week in English (ENG), German (GER), French (FRE), Italian (ITA), Spanish (SPA) or Dutch (DUT).
2. Press the SET button to confirm and move to select the city code for your time zone.
3. City Code **LAX** (Los Angeles) will flash. Use the UP and DOWN button to select a city code in your time zone. Refer to table in the back of this quick setup guide, for a list of available cities.
4. Press the SET button to confirm the city selection. The year will flash 2005.
5. Press the UP or DOWN button to select the correct **year.**
6. Press the SET button to confirm year selection. The month will flash.
7. Press the UP or DOWN button to select the correct **month.**
8. Press the SET button to confirm selection. The numeric date will flash.
9. Press the UP or DOWN button to select the correct **date.**
10. Press the SET button to confirm selection. M/D or D/M will flash.
11. Press the UP or DOWN button to select the correct order of month & year. (**M…D**)
12. Press the SET button to confirm selection. 12H will flash.
13. Press the UP or DOWN button to select either **12 hour** (AM/PM) or **24 hour** (24:00) time format
14. Press the SET button to confirm selection. The Hour will flash.
15. Press the UP or DOWN button to select the correct **hour.**
16. Press the SET button to confirm selection. The minutes will flash.
17. Press the UP or DOWN button to select the correct **minutes.**
18. Press the SET button to confirm selection and to complete the initial programming for your weather station.
19. After programming is completed, the weather station will show the default clock and alarm window.

Note: If you do not complete this sequence your entries will be lost.
Note: Press and hold **SET** anytime during the setup to return to normal clock and alarm window and all previous settings will be cancelled.

Positioning Sensors Outside

- Each sensor reads to the weather station independently.
- Consider the location of the weather station in the house and in relation to each sensor outside.
- The transmission range is 100 ft (30 m) open air.
- Obstacles such as walls, concrete and large metal objects can reduce the range by one-half.
- Place sensors and weather station in desired locations, and wait approximately 15 minutes before permanently mounting to ensure that there is proper reception.

Wind

- For most accurate wind readings, mount the wind sensor as the highest item in the area with a 50 foot clearance in all directions.
- Cup should be on the bottom.
- Use 4 screws to mount the wind sensor vertically on a piece of wood about 3 inches wide.

Rain

- Make sure that the rain sensor is level–look inside, there is a built-in level. Make sure the bubble is centered.
- Place the protective screen over the top to protect the rain sensor from the debris.
- Where practical, mount the rain sensor in place with wood screws (not included).
- Make sure that the rain sensor is in open area where precipitation falls directly into the sensor's bucket, ideally 3-6 feet above the ground.
  Note: The rain sensor will need to be cleaned of debris on a regular basis. Mount in an accessible area.
- The rain sensor should be placed in an open area away from the walls, fences, trees and other coverings which may reduce the amount of rain falling into the bucket. Additionally, trees and rooftops may be sources of pollen and debris that may clog the rain sensor.
- To avoid the rain shadow effects, place the rain sensor horizontally, on the distance corresponding about two to four times the height of any nearby obstruction.

Thermohygro

- The remote thermohygro sensor should be placed in the area with a free air circulation and sheltered from direct sunlight and an extreme weather conditions.
- While the thermohygro sensor is weather resistant, avoid submersion in water or snow.
- We recommend that you mount the outdoor temperature sensor on an outside North-facing wall.
- The remote thermohygro sensor can stand vertically on a flat surface or mounted on the wall in vertical position
- Use screws when mounting the thermohygro sensor on the wall
- Avoid placing the thermohygro sensor near sources of heat such as chimneys and heating elements.
- Avoid areas that collect or radiate heat from the sun, such as metal, brick/concrete structures, paving or patio decks.

Weather Station

- Make sure that the weather station is locating within the operating range of all remote sensors.
- Mount the remote sensors within the line of sight of the weather station.
- Transmission range may be affected by trees, metal structures and electronic appliances.
- Test reception before permanently mounting all the remote sensors.
- Mount near an exterior wall with the front or back facing toward Ft. Collins, Colorado for best WWVB reception.

Avoid placing the weather station in the following areas:
- Direct sunlight and surfaces emitting and radiating heat, such as heating ducts or air conditioners.
- Areas with interference from the wireless devices (such as cordless phones, radio headsets, baby listening devices, etc.) and electronic appliances.

Custom Settings

You weather station will function without additional settings. These custom settings allow more detailed settings and alerts. We will take each section individually.

Pressure and Weather

Note: Wait at least 15 minutes after initial set up to view pressure or altitude information.
Press the UP or DOWN button arrow buttons on the weather station until the **pressure and weather icon** begins to flash, in the left corner of the upper display.

The weather station will display (local) barometric pressure, sea level pressure, and weather forecast and moon phases. Historical statistics can also be viewed, including the sea-level pressure for the past 24 hours, moon phase for the past and following 39 days, and a selectable bar-chart for viewing pressure/temperature & humidity history. Pressure may be displayed **inHg** (English), **hPa/mBar** (scientific) or **mmHg** (metric). Altitude is displayed in meters or feet.

Pressure and Altitude Information

Pressure and altitude work together, so only set one. The weather station will measure local pressure and calculate the other two parameters based on the Local Pressure.


Sea Level Pressure and Altitude are interdependent.
- Adjust altitude and the weather station will calculate sea level pressure.
- Adjust sea level pressure, and the weather station will automatically calculate altitude.
- You can only adjust one of the two–either sea level barometric pressure or altitude.

Press and release the SET button to alternate between
- Sea Level Pressure
- Local Pressure
- Local Altitude settings

The default settings are: inHg (Inches of Mercury), and 33 feet. These setting can be changed to local readings.
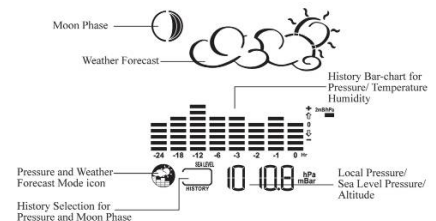
Local Pressure reflects pressure changes at your **specific location (house).** The local altitude/elevation must be programmed according to GPS readings, internet, etc.

Sea Level Pressure reflects pressure changes in your **surrounding metro area.** The **Sea level** barometric pressure value can be adjusted according to the local metro area weather information (Sources–local TV, radio station, etc.).

Changing or Setting Sea Level Pressure

1. Press the SET button until the local pressure with the word "SEA LEVEL" is displayed.
2. Hold the MEMORY button until the **pressure unit** is flashing, inHg, mmHg or hPa/mBar
3. Set the pressure units with the UP or DOWN arrow buttons
4. Press the MEMORY button to confirm your selection
5. Hold the SET button until the **pressure digits** flash.
6. Set the sea level pressure using the UP or DOWN buttons to adjust the pressure value. Hold the UP or DOWN arrow buttons for faster digits advancement
7. Press the SET button to confirm your selection.

Changing or Setting Altitude

1. Press the SET button until the local altitude value will be displayed
2. Hold the MEMORY button until the **altitude unit** is flashing, feet or meters.
3. Press the UP or DOWN button arrow buttons to set altitude in feet or meters
4. Press MEMORY button once to confirm your selection
5. Hold the SET button until the **altitude digits** are flashing.
6. Set the altitude value with the UP or DOWN arrow buttons. Hold the UP or DOWN arrow button for faster digits advancement
7. Press the SET button to confirm your selection.

View the Sea Level Pressure History

- From any mode, press the HISTORY button.
- When the SEA LEVEL is displayed, press and release the HISTORY button repeatedly to view the sea level pressure history for the past 24 hours, in hour intervals.
- If no buttons are pressed for 5 seconds, the weather station will automatically exit history mode and return to the Pressure and Weather Forecast mode.

View the Pressure, Temperature and Humidity Bar Charts
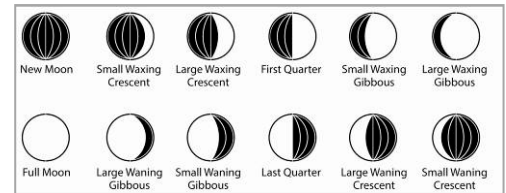
The pressure bar graph shows barometric pressure variations over the past 24 hours. This is very useful for understanding the Barometric trends that are used in weather forecasting. Each bar icon represents 0.06 inHg. Alternatively, the bar chart can be used to display 24 hour trend data for Sea Level Pressure, outdoor temperature or outdoor humidity (channel 1 only).

- Select the Pressure and Weather Forecast window.
- Hold the ALARM/CHART button to toggle the bar chart title (right bottom corner).
- Alternate between Pressure, Outdoor Temperature (thermometer icon) and Relative Humidity (dew drop icon).
- The single bar on the far right indicates rising or falling trend.

View the Moon Phase History

The weather station indicates the current moon phase. Previous moon phases are selected with the minus sign showing: -1 day, -2 days, etc. Future moon phase are selected based on the days ahead: +1 day, + 2 days, etc. up to 39 days.

- Select the Pressure and Weather Forecast display.
- Press and release the MEMORY button, and **+ 0** days will flash.
- Press the UP or DOWN arrow buttons selecting from today's date a future (+) or past (-) days and the corresponding moon phase will be displayed. Hold either arrow button for a quick advance.
- Press the MEMORY button to exit

New Moon | Small Waxing Crescent | Large Waxing Crescent | First Quarter | Small Waxing Gibbous | Large Waxing Gibbous
Full Moon | Large Waning Gibbous | Small Waning Gibbous | Last Quarter | Large Waning Crescent | Small Waning Crescent

Weather Forecast Icons

The weather forecasting feature is estimated to be 70% accurate. The weather forecast is based solely upon the change of air pressure over time. The icons are predicting 12-24 hours in the future, not current conditions. It may be sunny out your window, but the pressure is falling so the forecast station will show clouds with rain icon. The SUNNY icon indicates clear weather, even when displayed during the night-time.

Sunny   Partly Cloudy   Cloudy   Light Rain   Heavy Rain   Unstable Weather   Snow

Temperature and Humidity

The weather station supports indoor temperature & humidity and up to five remote thermohygro sensors (1 remote sensor is included).
Note: At this time, there are **no** additional thermohygro sensors available for purchase.

- Temperature can be displayed in either Fahrenheit (ºF) or Celsius (ºC).
- The weather station calculates indoor comfort level--Wet, Comfort or Dry.
- Dew Point based on temperature & humidity readings.
- Temperature alarms can be set on the weather station.
- Thermohygro sensor remote battery status is monitored on the main weather station.

View Temperature and Dew Point

 With **temperature and humidity icon** flashing, press the SET button to alternate between temperature and relative humidity or dew point and relative humidity.

Set Temperature Alarm

1. In the temperature and humidity mode, press and release the ALARM/CHART button once selecting the desired alarm limit--Upper or Lower
2. Hold the ALARM/CHART button until the temperature alarm icon starts flashing.
3. Use the UP or DOWN arrows to select the temperatures. Press and hold either button for fast digits advance.
4. Press the ALARM/CHART button to confirm selection and return to the Temperature Alarm selection screen.
   Note: The temperature alarms have a 1°F (0.5 ºC) deviation to prevent false alarms due to small temperature fluctuations. Temperature has to fall below (or above) the programmed level(s) to activate the alert.

Select Fahrenheit or Celsius

- With temperature and humidity icon flashing, hold the SET button to alternate between temperature in Fahrenheit (ºF) or Celsius (ºC).

Disable the Temperature Alarm

1. In the Temperature and Humidity Mode, press and release the ALARM/CHART button once to select the high or low temperature alarm.
2. With the alarm icon showing, press and release the UP or DOWN buttons to turn the alarm **OFF.** When the temperature shows with the high or low alarm icon, the alarm is active.

Max/Min Records

View: With the temperature & humidity icon flashing, press the MEMORY button to recall a current temperature and humidity, minimum temperature and humidity or maximum temperature and humidity at the remote location.

Reset: Hold the MEMORY button for five seconds to clear all MIN/MAX readings.

Rain Window

The weather station records the total amount of the rainfall for:
- Last hour
- 24 hours
- Past day
- Past week
- Past month

The rainfall can be displayed in inches or mm. There is a daily rainfall alert that can be programmed.

Rain Statistics

View: With the **rain icon** flashing Press either SET or MEMORY button to recall a rain statistics for the past hour, past 24 hours, yesterday, past week or past month.
Note: Last Hour rainfall value is displayed as a rate of rain in either "inch/hr." or "mm/hr."

Reset: With the rain icon flashing, press and hold the MEMORY button to reset all rainfall statistics.

Setting Rain Display; inches or mm

- With the rain icon flashing, press and hold the **SET** button to toggle rainfall units of measure between mm and inches.

24 hour Rainfall Alert

Set Daily Rainfall Alert
1. With the rain icon flashing, press ALARM/CHART button to display the rainfall alert.
2. Hold ALARM/CHART button until the rainfall alert ALARM HI will flash.
3. Set the desired value for the Rainfall Alert by using UP or DOWN arrow button. Press and hold either button for fast digits advance.

Alert Off
1. With the rain icon flashing, press the ALARM/CHART button to display either the current rainfall statistics or the daily rainfall alert with ALARM HI displayed.
2. Press the UP or DOWN arrow button to enable or disable it.
3. If the alert is disabled, the OFF will be displayed.
4. Press ALARM/CHART button to confirm selection and the weather station will return to the rainfall alert display.

Wind Window

Wind direction is shown by compass points (i.e. NW) or in bearings starting from north (i.e. 22.5º).
The weather station records the maximum wind speed and gusts collected during the day. Wind speed and gust alerts can be programmed.
- Wind sensor temperature or wind chill are selectable
- Average wind speed (over the past 10 minutes) is displayed
- Wind Gust

Wind Display

1. Press the UP or DOWN button until the **wind icon** on the display flashes.
2. Press and release the SET button to alternate between:
   - Wind chill with direction in bearings
   - Wind chill with direction in compass points
   - Wind sensor temperature & wind direction in compass points
   - Wind sensor temperature and wind direction in bearings

Select Wind Speed in km/h, mph, m/s or knots

With the wind icon flashing, hold the SET button to set the wind speed units in:
- km/h (kilometers per hour)
- mph (miles per hour)
- m/s (meters per second)
- knots

Wind MAX/MIN

View: With the wind icon flashing, press and release the MEMORY button to view:
- Current wind speed
- Daily maximum wind speed
- Gust speed
- Daily maximum gust speed

Reset: With the wind icon flashing, hold the MEMORY button to reset all wind statistics.

Set Wind Alerts

The weather station will allow you to set **Wind Speed Hi alert** and **Wind Gust Hi alert.**

1. With the wind icon flashing, press ALARM/CHART button to select the desired alarm.
2. Hold the ALARM/CHART button until alert and corresponding icon will flash.
3. Set the alert using UP or DOWN arrow button. Press and hold either button for fast digits advance.
4. Press ALARM/CHART button to confirm your selection and return to the wind alert selection screen.

Disable the Wind Alert

- To disable wind alert when it is displayed after pressing ALARM/CHART button, press the UP or DOWN button arrow button. OFF will be displayed instead of previously set alarm time.

Note: The wind speed alert is set at 5 mph default and the wind gust alert is set to 7 mph default to prevent false alerts from small fluctuations.

Clock and Alarm Window

With the **clock and alarm icon** flashing, press the SET button to switch what is displayed:
- Local Time
- City code
- Seconds
- Date
- UTC time

The **program menu** (above) can be accessed in the clock and alarm window.

Radio Controlled Clock Signal Status

Clock Module icon

12:08 Mon

Time/Date Display

Battery Status
Weekly Alarm
Single Alarm
Weekly/City/Second Year/UTC time Display

Time Alarm

There are two time alarms available on the weather station:
- Weekday alarm (**W**)
- Single alarm (**S**)

The weekday alarm will repeat Monday through Friday at the time set.
The single day alarm is only for this one specific day and will not activate on subsequent days.
Note: The snooze duration for listed alarms can also be programmed up to 15 minutes.

||)W

||)S

Set Time Alarms

1. With the clock and alarm icon flashing, press the ALARM/CHART button to select the desired alarm.
2. Hold the ALARM/CHART button and the **hour** will flash.
3. Set the alarm hour using UP or DOWN arrow button. Press and hold either arrow button for quick digit advance.
4. Press the ALARM/CHART button to confirm selection then the **minutes** will flash.
5. Set the alarm minutes using UP or DOWN arrow button. Press and hold either arrow button for quick digit advance.
6. Press the ALARM/CHART button to confirm selection.
7. Set a Snooze interval using UP or DOWN arrow button. Press and hold either arrow button for quick digit advance.
   Note: both alarms share same snooze time duration
8. Press the ALARM/CHART button to confirm your selection.
9. When programming is completed, the weather station will return to the alarm selection screen.

Enable/Disable Time Alarms
1. Press the ALARM/CHART button to display the weekday alarm or single day alarm time. If these alarms are not set, the abbreviation OFF will be displayed.
2. To enable or disable any of these alarms, press the UP or DOWN button arrow button.
3. Press the ALARM/CHART button to confirm your setting
   Note: Press the SET button anytime during alarm programming mode to return to the default clock display.

Snooze function

When the alarm sounds, press the LIGHT/SNOOZE button to activate the snooze feature for the interval set.
Note: Alarm will automatically "snooze" if no buttons are pressed after the alarm sounds for 2 minutes. This will occur three times only.

WWVB Radio-Controlled Time Reception

The radio controlled clock searches for, and periodically synchronizes to, the NIST (National Institute of Standards and Technology) atomic clock signal transmitted from Ft. Collins, Colorado, throughout the entire continental United States.
- During night-time hours, atmospheric conditions improve radio signal reception. A single daily reception is sufficient enough to keep the clock accuracy within milliseconds.
- The weather station should be positioned 6 feet (2 meters) from interference sources such as a TV, computer, microwave, etc.
- The signal reception is weakened within concrete walls found in basements or office buildings. Place the weather station near the window for best reception.
- It takes between 24 and 72 hours for the clock to receive an atomic time signal reception

Once the atomic time signal is received, the date and time will be set automatically, and the icon will appear. The weather station is programmed to search for the atomic time signal daily each hour between 1:00 am and 4:30 am. Once the time signal has been successfully received, the time and date will be updated automatically.

Manual Signal Search

With the clock and alarm icon flashing, hold the UP arrow for three seconds to manually search for the WWVB signal. A triangular tower icon will start flashing next to the clock icon.

Searching   Strong Signal   Weak Signal   No signal

Backlight Options

When operating with the optional A/C power cord, the weather station backlight can be turned ON, OFF or automatic (depending on light conditions).
* AUTO: the backlight will be off in when there is adequate light, and will come on automatically in low light conditions.
* ON: the backlight will be on constantly when using A/C power.
* OFF: the backlight will remain off unless the LIGHT button is pressed.

Note: For continuous backlight control the optional A/C adaptor (not included) must be plugged in.

Backlight sensor sensitivity can be adjusted to high or low using the switch, located on the back of the weather station.

When operating on battery power alone, the backlight can be activated for three seconds by pressing the LIGHT button on top of the weather station.
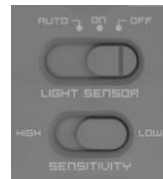
Remote Sensor Status Icon

The wave icon above the channel 1 display shows the connection status of the remote sensor.

Searching   Strong   No Signal

Activate Search for Remote Sensors

* Hold the DOWN arrow button for 4–6 seconds to activate a search for all remote sensors.

Normally, the weather station will automatically find and display measurement results from the remote sensors. Occasionally other radio transmission sources (TV, cordless or cell phones, etc.) can interrupt the sensor signal.

Memory Reset Procedure

Note: This will completely reset all of the stored memory.
1. Hold SNOOZE and UP buttons for 4 seconds so the backlight will flash.
2. Press the SET button which will clear the memory–the weather station will start beeping with a 1 second delay.
3. Wait until the beeping stops.
4. Disconnect weather station from the A/C adapter. Remove batteries from the back or the weather station (optional) if installed.
5. Wait at least 10 seconds, and then reinsert the A/C adapter and batteries.
   IMPORTANT: Do not press any buttons during the setup process which take 5-15 minutes. During this time the weather station will show the pressure icon and **inHg** (inches of mercury) flashing. Setup is completed when the weather station shows default settings for pressure and altitude (sea level), indoor/outdoor temperature and humidity, wind and rain readings, etc.
6. Follow the program menu to **set language** and **city code** then any custom settings desired.

Changing Batteries

The battery status of each remote sensor is checked every hour. If the low battery indicator lights up, replace the batteries in the corresponding sensor.
* **Do Not Mix Old and New Batteries**
* **Do Not Mix Alkaline, Standard, Lithium or Rechargeable Batteries**

Weather Station

With A/C power cord: Connect the optional 7.5V A/C adaptor to the weather station to avoid losing any data.
* Remove the battery compartment door at the back and replace all batteries.
* Replace the battery compartment door.

Without A/C power cord:
* Remove the battery compartment door at the back and replace all batteries.
* Replace the battery compartment door.
* **Do not** press any buttons during the setup process, which takes 5-15 minutes. During this time, the weather station will show the pressure icon and **inHg** (inches of mercury) flashing. Setup is completed when the weather station shows default settings for pressure and altitude (sea level), indoor/outdoor temperature and humidity, wind and rain readings, etc.
* Set language and city code.

Remote Sensor Batteries

* Replace the batteries following the setup instructions for the corresponding sensor.
* When the batteries are properly installed, the remote sensor will resume sending signals to the weather station.
* Hold the DOWN arrow button for 4–5 seconds on the weather station to search for the remote sensors.

Care and Maintenance

* Do not immerse the sensors or weather station in water.
* Do not clean the sensors or weather station with abrasive or corrosive materials that might scratch plastic parts or corrode electronic circuits.
* Do not subject the sensors or weather station to excessive force, shock, dust, temperature, or humidity, which may result in malfunctions, shorter lifespan, damaged batteries, and damaged parts.
* Do not tamper with the product's internal components. Doing so will invalidate the warranty and may cause damage.
* The product contains no user-serviceable parts.
* Read the user's manual thoroughly before operating the product.

Specifications

Radio Frequency: 433 MHz
RF Reception range: 100 feet (30 m) open air

Barometric Pressure
Measuring Range: 14.75 inHg to 32.44 inHg (500 hPa to 1100hPa); (374.5 mmHg to 823.8 mmHg)
Resolution: 0.003 inHg (0.1 hPa, 0.08 mmHg)
Operating range: 100 feet (30 m) open air
Sampling interval: 20 minutes
Sea level Altitude Compensation Range: -657 ft. to 16404 ft. (-200m to +5000 m)

Temperature (Indoor)
Operating Range: 14.2°F to 140°F (-9.9°C to 60°C)
Resolution: 0.2°F (0.1°C)
Sampling Interval: 10 seconds

Temperature (Remote)
Range: -40°F to 176°F (-40°C to 80°C)
Resolution: 0.2°F (0.1°C)
Transmitting Interval: around 47 seconds

Humidity (Indoor)
Operating Range: 0% to 99%
Resolution: 1%
Sampling Interval: 10 seconds

Humidity (Remote)
Operating Range: 0% to 99%
Resolution: 1%
Sampling Interval: 10 seconds
Transmitting Interval: around 47 seconds
Operating range: 100 feet (30 m) open air

Wind Direction
Range: 0° to 360°
Resolution: 22.5°
Transmitting interval: 33 seconds
Operating Range: 100 feet (30 m) open air

Wind Speed
Range: 0 to 199.9mph (199.9 Km/h, 173.7 Knots, 89.3 m/s)
Resolution: 0.1mph (0.16 Km/h)
Starting Threshold: 3mph (4.8 Km/h)
Wind/Gust Speed Update Interval: 33 seconds
Wind/Gust Sampling Interval: 11 seconds
Operating Range: 100 feet (30 m) open air

Rainfall
1h/24h/yesterday range: 0 to 78.73 inch (0 to 1999.9 mm)
Last week/ last month range: 0 to 787.3 inch (0 to 19999 mm)
Resolution: 0.03 inch (0.6578 mm)
Transmitting Interval: 183 seconds
Operating Range: 100 feet (30 m) open air

Power (8 AA Batteries, 2 AAA Batteries)
Weather Station 7.5V AC power adaptor (included) or 4 x AA 1.5V batteries (not included)
TS21Thermohygro sensor: 2 x AAA 1.5V batteries (not included)
TS805 Anemometer: 2 x AA 1.5V batteries (not included)
TS906 Rain Sensor: 2 x AA 1.5V batteries (not included)

Battery Life (Alkaline)
Weather Station 2 months (without AC adapter)
TS21 Thermohygro sensor: Over 12 months
TS805 Anemometer: 2 years
TS906 Rain Sensor: 2 years

Dimensions
Weather Station 7.31 (L) x 5.39 (H) x 1.26 (D) inches   (185.8 (L) x 136.9 (H) x 32 (D) mm)
TS21 Thermohygro sensor: 2.37 (L) x 4 (H) x 1 (D) inches   (60 (L) x 101 (H) x 25 (D) mm)
TS805 Anemometer: 19.16 (L) x 19.16 (H) x 15.35 (D) inches   (486.6 (L) x 486.6 (H) x 390 (D) mm)
TS905 Rain sensor: 6.49 (L) x 6.89 (H) x 4.72 (D) inches   (165 (L) x 175 (H) x 119 (D) mm)

CITY CODES

Time zone is based on a city code. Select a city near you, in the same time zone.
Pacific, Mountain, Central and Eastern time zones will display a map of the USA.

North America	Time Zone Offset	Code	Other Countries	Time Zone Offset	Code	Other Countries	Time Zone Offset	Code
Las Vegas, NV	-8	LAS	Addis, Ababa, Ethiopia	3	ADD	Kingston, Jamaica	-5	KIN
La Angeles, CA	-8	LAX	Adelaide, Australia	9.5	ADL	Osaka, Japan	9	KIX
Portland, OR	-8	PDX	Ankara, Turkey	2	AKR	Kuala Lumpur, Malaysia	8	KUL
San Diego, CA	-8	SAN	Algiers, Algeria	1	ALG	Lima, Peru	-5	LIM
Seattle, WA	-8	SEA	Amsterdam, Netherlands	1	AMS	Lisbon, Portugal	0	LIS
San Francisco, CA	-8	SFO	Stockholm, Arlands, Sweden	1	ARN	London, England	0	LON
San Jose, CA	-8	SJC	Asuncion, Paraguay	-3	ASU	La Paz, Bolivia	-4	LPB
Vancouver, Canada	-8	VAC	Athens, Greece	2	ATH	Liverpool, England	0	LPL
Vancouver BC, Canada	-8	YVR	Bucharest, Romania	2	BBU	Lyon, France	1	LYO
Denver, CO	-7	DEN	Barcelona, Spain	1	BCN	Madrid, Spain	1	MAD
El Paso, TX	-7	ELP	Belgrade, Yugoslavia	1	BEG	Melbourne, Australia	10	MEL
Phoenix, AZ	-7	PHX	Beijing, China	8	BEJ	Milan, Italy	1	MIL
Calgary Alberta, Canada	-7	YYC	Berlin, Germany	1	BER	Manila, Phillipines	8	MNL
Austin, TX	-6	AUS	Birmingham, England	0	BHX	Moscow, Russia	3	MOW
Birmingham, AL	-6	BHM	Bangkok, Thailand	7	BKK	Marseille, France	1	MRS
Nashville, TN	-6	BNA	Brisbane, Australia	10	BNE	Munich, Germany	1	MUC
Chicago, IL	-6	CGX	Bordeaux, France	1	BOD	Montevideo, Uraguay	-3	MVD
Chihauhua, Mexico	-6	CUU	Bogata, Columbia	-5	BOG	Naples, Italy	1	NAP
Dallas, TX	-6	DAL	Bremen, Germany	1	BRE	Nairobi, Kenya	3	NBO
Houston, TX	-6	Hou	Brussels, Germany	1	BRU	Nanjing (Nanking), China	8	NKG
Memphis, TN	-6	MEM	Buenos Aires, Argentina	-3	BUA	Odessa, Ukraine	2	ODS
Mexico City, Mexico	-6	MEX	Budapest, Hungary	1	BUD	Omaha, Nebraska, USA	-6	OMA
Milwaukee, WI	-6	MKE	Cairo, Egypt	2	CAI	Oslo, Norway	1	OSL
Minneapolis, MN	-6	MSP	Caracas, Venezuela	-4	CCS	Paris, France	1	PAR
New Orleans, LA	-6	MSY	Calcutta, India (as Kolkata)	5.5	CCU	Perth, Australia	8	PER
Oklahoma City, OK	-6	OKC	Cordoba, Argentina	-3	COR	Prague, Czech Republic	1	PRG
San Antonio, TX	-6	SAT	Copenhagen, Denmark	1	CPH	Panama City, Panama	-5	PTY
St Louis, MO	-6	STL	Cape Town, South Africa	2	CPT	Rangoon, Myanmar	6.5	RGN
Atlanta, GA	-5	ATL	New Dehli, India	5.5	DEL	Rio de Janeiro, Brazil	-3	RIO
Boston, MA	-5	BOS	Dakar, Sengal	0	DKR	Reykjavik, Iceland	0	RKV
Baltimore, MD	-5	BWI	Dublin, Ireland	0	DUB	Rome, Italy	1	ROM
Cleveland, OH	-5	CLE	Durban, South Africa	2	DUR	Santiago, Chile	-4	SCL
Columbus, OH	-5	CMH	Kinshasa, Congo	1	FIH	Shanghai, China	8	SHA
Cincinnati, OH	-5	CVG	Frankfurt, Germany	1	FRA	Singapore, Malasia	8	SIN
Washington, DC	-5	DCA	Glasgow, Scotland	0	GLA	Sofia, Bulgaria	2	SOF
Detroit, MI	-5	DTW	Guatemala City, Guatemala	-6	GUA	Sao Paulo, Brazil	-3	SPL
Havana, Cuba	-5	HAV	Hamburg, Germany	1	HAM	Salvador, Brazil	-3	SSA
Indianapolis, IN	-5	IND	Helsinki, Finland	2	HEL	Sydney, Australia	10	SYD
Jacksonville, FL	-5	JAX	Hong Kong, China	8	HKG	Toykyo, Japan	9	TKO
Miami, FL	-5	MIA	Irkutsk, Russia	8	IKT	Tripoli, Libya	2	TRP
New York, NY	-5	NYC	Jakarta, Indonesia	7	JKT	Vienna, Austria	1	VIE
Philadelphia, PA	-5	PHL	Johannesburg, South Africa	2	JNB	Warsaw, Poland	1	WAW
Pittsburgh, PA	-5	PIT				Zurich, Switzerland	1	ZRH
Tampa, FL	-5	TPA						
Montreal, Quebec, Canada	-5	YMX						
Ottawa, Ontario, Canada	-5	YOW						
Toronto, Ontario, Canada	-5	YTZ						

La Crosse Technology, Ltd provides a 1-year limited warranty on this product against manufacturing defects in materials and workmanship.

This limited warranty begins on the original date of purchase, is valid only on products purchased and used in North America and only to the original purchaser of this product. To receive warranty service, the purchaser must contact La Crosse Technology, Ltd for problem determination and service procedures. Warranty service can only be performed by a La Crosse Technology, Ltd authorized service center. The original dated bill of sale must be presented upon request as proof of purchase to La Crosse Technology, Ltd or La Crosse Technology, Ltd's authorized service center.

La Crosse Technology, Ltd will repair or replace this product, at our option and at no charge as stipulated herein, with new or reconditioned parts or products if found to be defective during the limited warranty period specified above. All replaced parts and products become the property of La Crosse Technology, Ltd and must be returned to La Crosse Technology, Ltd. Replacement parts and products assume the remaining original warranty, or ninety (90) days, whichever is longer. La Crosse Technology, Ltd will pay all expenses for labor and materials for all repairs covered by this warranty. If necessary repairs are not covered by this warranty, or if a product is examined which is not in need or repair, you will be charged for the repairs or examination. The owner must pay any shipping charges incurred in getting the La Crosse Technology, Ltd product to a La Crosse Technology, Ltd authorized service center. La Crosse Technology, Ltd will pay ground return shipping charges to the owner of the product to a USA address only.

The La Crosse Technology, Ltd warranty covers all defects in material and workmanship with the following specified exceptions: (1) damage caused by accident, unreasonable use or neglect (including the lack of reasonable and necessary maintenance); (2) damage occurring during shipment (claims must be presented to the carrier); (3) damage to, or deterioration of, any accessory or decorative surface; (4) damage resulting from failure to follow instructions contained in the owner's manual; (5) damage resulting from the performance of repairs or alterations by someone other than an authorized La Crosse Technology, Ltd authorized service center; (6) units used for other than home use (7) applications and uses that this product was not intended or (8) the products inability to receive a signal due to any source of interference.. This warranty covers only actual defects within the product itself, and does not cover the cost of installation or removal from a fixed installation, normal set-up or adjustments, claims based on misrepresentation by the seller or performance variations resulting from installation-related circumstances.

LA CROSSE TECHNOLOGY, LTD WILL NOT ASSUME LIABILITY FOR INCIDENTAL, CONSEQUENTIAL, PUNITIVE, OR OTHER SIMILAR DAMAGES ASSOCIATED WITH THE OPERATION OR MALFUNCTION OF THIS PRODUCT. THIS PRODUCT IS NOT TO BE USED FOR MEDICAL PURPOSES OR FOR PUBLIC INFORMATION. THIS PRODUCT IS NOT A TOY. KEEP OUT OF CHILDREN'S REACH.

This warranty gives you specific legal rights. You may also have other rights specific to the State. Some States do not allow the exclusion of consequential or incidental damages therefore the above exclusion of limitation may not apply to you.

For warranty work, technical support, or information contact:

La Crosse Technology, Ltd
2817 Losey Blvd. S.
La Crosse, WI 54601

Contact Support: 1-608-782-1610
Product Registration:
www.lacrossetechnology.com/support/register

Online at:
http://www.lacrossetechnology.com/1517

RF Exposure mobile:
The internal / external antennas used for this mobile transmitter must provide a separation distance of at least 20 cm (8 inches) from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter."

Statement according to FCC part 15.19:
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Statement according to FCC part 15.21:
Modifications not expressly approved by this company could void the user's authority to operate the equipment.

Statement according to FCC part 15.105:
NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.
However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help